

GUIDELINE FOR MANAGING THE SECOND STAGE OF LABOUR

Preamble

Midwives have an important responsibility to safeguard the interests of maternal and fetal health during labour and birth. The College of Midwives (CMBC) offers this guideline to assist midwives with assessment and informed decision-making in the second stage of labour.

The CMBC expects that midwives will use their best clinical judgment in assessing and responding to each client's labour, both in hospital and out-of-hospital settings, and incorporate appropriate monitoring of both maternal and fetal well-being within the plan of care. This guideline should be used in combination with the College's Indications for Discussion, Consultation and Transfer of Care and Indications for Planned Place of Birth, Guideline for Fetal Health Surveillance in Labour, as well as other College guidelines and the midwife's own practice protocols for the provision of care in labour. Decisions about management are made taking into account the total clinical picture.

The onset of second stage

The second stage of labour begins with full dilation of the cervix and ends with the birth of the baby. The expulsive phase is marked by the maternal urge to bear down and may not coincide with full dilation. It is commonly believed that pushing when cervical dilation is not complete can be both unproductive and damaging to the cervix, especially in nulliparas. However, Enkin et al (2000) reassure that in the presence of a rim of cervix and a strong maternal desire to push, little or no harm is likely if this instinctive urge is followed and there is progress. Full dilation can be confirmed by careful vaginal exam or be assumed when the presenting part is visible at the introitus.

Recommendations

- If the client expresses a desire to push when there is reason to believe the cervix may not be fully dilated, dilation should be checked by vaginal examination.
- If the client is less than 8 cm dilated and has an irresistible urge to bear down, assist the client to avoid pushing and consider a change in maternal position for comfort. If the urge to push remains uncontrollable, consider regional analgesia.

The latent phase of second stage

The latent phase of second stage is the period after reaching full dilation where the client experiences a decrease in strength and frequency of contractions and no urge to push. Some do not have a latent phase in second stage, while others may experience this phase lasting up to an hour. The latent phase can provide an opportunity for maternal rest prior to the active phase of pushing.

Recommendations

- The fetal heart should be auscultated at least every 15 minutes during the latent phase.

- If the latent phase lasts longer than an hour and encouraging the client to push does not produce a spontaneous urge and progress in descent, augmentation may be considered¹.

The active phase of second stage

The active phase of second stage begins after full dilation of the cervix accompanied with regular contractions and an urge to push.

Pushing during active second stage

Research supports a spontaneous, client-led approach to bearing down in the second stage of labour (Enkin et al., 2000). Bearing-down efforts are usually brief (4-6 seconds), with infrequent or short periods of breath-holding. These efforts increase in intensity and duration as the second stage progresses. A study amongst nulliparas who were encouraged to push spontaneously reported a mean duration of second stage of 45 minutes and none exceeded 95 minutes (Enkin et al., 2000). Where spontaneous pushing does not result in progressive descent of the presenting part, a more directive approach, including upright positioning, may assist the client to use her contractions more effectively. Upright positions have been found to shorten the duration of second stage and lower the likelihood of operative vaginal birth, abnormal FHR and episiotomy, but increase the likelihood of perineal trauma and blood loss greater than 500 mL (Gupta, Hofmeyr, & Shehmar, 2012).

Recommendations

- The fetal heart should be auscultated after every contraction, or at least every five minutes².
- Encourage upright positioning and directed pushing when progress is not achieved with natural bearing-down efforts. With upright positioning such as standing or use of a birth chair, a change in position immediately after birth may reduce the risk of postpartum hemorrhage (Gupta et al., 2012).

Duration of the second stage of labour

When there is progress and no evidence of maternal or fetal compromise, imposing an arbitrary limit on second stage is unnecessary. With progressive descent of the presenting part, management will be based on the same principles of monitoring maternal and fetal health that apply during the first stage of labour. When the mother and baby's conditions are satisfactory and there is evidence of descent, operative interventions should not be required.

There is no good evidence about the absolute time limits of physiological labour (Downe 2004; NICE 2007; Zhang et al 2010). Most researchers who have examined this area have shown that, the second stage of labour can last for up to three hours or so before the risk of maternal and/or fetal compromise begins to increase (Albers 1999; Allen et al 2009). In the presence of regular contractions, maternal and fetal well-being, and progressive descent, considerable variation during second stage is to be expected. (Marshal & Raynor, 2014, p. 370)

¹ *Standards, Limits & Conditions for Prescribing, Ordering & Administering Drugs – Induction and Augmentation of Labour*

² *CMBC Guideline for Fetal Health Surveillance in Labour*

Assessment of progress in the second stage

The relationship of the presenting part to the brim of the pelvis should be assessed by both abdominal palpation and vaginal examination. Abdominal examination may reduce the number of vaginal exams that are necessary. It is important to assess moulding of the fetal head in addition to determining descent and position during vaginal examination, especially if progress is slow and/or cephalopelvic disproportion is suspected.

If the second stage of labour is prolonged, or other concerns such as the presence of meconium or abnormal fetal heart rate are noted³, immediate intervention may be required. In these situations, continuous electronic fetal monitoring (EFM) is recommended. If labour is taking place in an out-of-hospital setting and the birth is not imminent, transport to hospital is required for monitoring and consultation.

Labour and vaginal birth depend upon the dynamic relationship between the fetus, the maternal pelvis, and uterine and maternal power. Failure of descent may be due to inadequate or incoordinate uterine contractions, malposition or malpresentation of the fetus or cephalopelvic disproportion. Malpresentation may be resolved by encouraging a variety of positions. Augmentation and/or epidural anesthesia may also assist in correcting malpresentation. While midwives will strive to minimize unnecessary interventions, timely consultation and use of augmentation and/or epidural can often help avoid an operative birth.

Regional analgesia and second stage

Epidural analgesia can influence maternal bearing-down efforts. There should be no set time limit on duration of second stage in the presence of maternal and fetal well-being and progressive descent when maternal sensation is affected by regional analgesia. In fact, delayed pushing up to 2 hours after full cervical dilatation in nulliparas receiving epidural analgesia is safe and may lower the risk of difficult deliveries (Fraser et al., 2000).

Delivery

Clients give birth in a variety of positions. Either gentle support of the perineum or a “hands off” approach with verbal coaching and encouragement can be used by the midwife.

After the delivery of the head, the shoulders rotate internally. As this takes place, midwives check and adjust for a cord around the neck in preparation for the birth of the shoulders. Once rotation is complete, the shoulders are delivered with maternal effort, one at a time to reduce perineal trauma. Difficulty with delivery of the shoulders is rare following the spontaneous birth of the head and anteroposterior rotation of the shoulders, but midwives should be prepared to use the appropriate sequence of maneuvers if difficulty arises. In most cases, once the shoulders are born the client can reach down and complete the rest of the delivery unassisted.

Dystocia in the active second stage

Second-stage dystocia is defined as greater than 1 hour of active pushing with no descent of the presenting part. Descent of less than 1 cm per hour in the second stage is associated with increased rate of operative delivery, maternal stress and anxiety, maternal infection and postpartum hemorrhage.

Currently, 32% of the cesarean sections performed in BC are attributed to dystocia of labour which includes cephalopelvic disproportion, breech, malposition and malpresentation (PSBC,

³ *CMBC Guideline for Fetal Health Surveillance in Labour*

2013). Dystocia primarily affects nulliparas and is the most common problem associated with labour.

Dystocia can be related to difficulty with any of the “four P’s”: Powers, Passenger, Passage and Psyche.

Etiology of Dystocia

Power: Hypotonic Contractions

Palpation is necessary to assess the strength of uterine power. It is important to note that an epidural analgesia can disrupt uterine power, which may lead to dystocia. Oxytocin augmentation may be necessary.

Passenger: Fetal Position and Fetal Size

Adequate power in labour will often correct malposition whereas inadequate power may result in persistent malposition. A normal-sized infant may present with a larger diameter if the head is asynclitic or not well-flexed. With adequate uterine power, this can be corrected. The diagnosis of a true cephalopelvic disproportion (CPD) should be limited to the inability of the well-flexed head to pass through the bony pelvis in the presence of adequate uterine power. Adequate uterine power can be evident in the presence of moulding and caput, or with the use of an intrauterine pressure catheter.

Passage: Bony Pelvis, Soft Tissue

A vaginal examination may reveal prominent ischial spines or sacrum, or a narrow pubic arch. However, clinical pelvimetry has not been shown to predict the outcome of labour. It is the dynamic relationship between the fetus, the maternal pelvis, and uterine and maternal power working together that will predict outcome. It is important to ensure that the bladder is empty and not a contributing factor causing soft-tissue obstruction during the second stage of labour.

Psyche: Anxiety, Stress, Pain

Stress in labour can result in the release of hormones which can cause dystocia. Pain, restriction of maternal movement and/or lack of support in labour are sources of physical and psychological stress. Anxiety may affect normal cervical dilation, resulting in prolonged labour and increasing the perception of pain. Increased anxiety causes stress hormones such as endorphins, adrenocorticotrophins, epinephrine and cortisol to rise. These hormones in turn act directly on the smooth muscle of the uterus and can reduce uterine contractions.

Prolonged second stage of labour may be defined as:

Nulliparous – lack of progress for three hours with regional anesthesia, or two hours without regional anesthesia.

Parous – lack of progress for two hours with regional anesthesia or one hour without regional anesthesia.

Recommendations for the Prevention and Management of Dystocia and Prolonged Second Stage of Labour

- Continuous emotional support during labour;
- Support the client in choosing a position in which to give birth;
- Pushing should generally not be encouraged unless an urge to do so is felt. If there is no urge to push after one hour during second stage, reassess the contractions, fetal

presentation and descent, and consider amniotomy and the use of oxytocin if contractions are not adequate;

- Consider delayed pushing if the fetal head is in the transverse or posterior position. In nulliparas with epidural at full dilation, one can use delayed pushing for a maximum of two hours or can encourage immediate pushing. Studies demonstrated there were fewer difficult births, 22.5% vs 17.8% with delayed pushing. This was most significant in those whose fetus was less than station +2 or in a posterior position (Hartmann et al., 2012);
- Continue epidural analgesia if it has been initiated, as research indicates that it does not increase the incidence of assisted vaginal birth. Discontinuing an epidural during second stage may result in the return of pain which may be perceived as worse than if no pain relief had been provided (Toledo, McCarthy, Ebarvia, & Wong, 2008);
- Extend the time limits for the second stage as long as progress is being made. The setting of a time limit for the second stage in the presence of progress and absence of suspected fetal compromise is not well-evidenced;
- Avoid early intervention with operative delivery if fetal health surveillance is normal;
- Use gentle perineal support and/or a “hands off” approach, or warm compresses (Asheim, Nilsen, Lukasse, & Reinar, 2011);
- Use episiotomy only to expedite birth in situations of a persistent abnormal fetal heart rate or maternal distress or in the rare instance when the fetal head is at the perineum for a sustained period of time without further progress;
- Be prepared to use appropriate maneuvers should difficulties arise;
- During second stage, consider reassessment after 1-2 hours of active pushing. The risk of postpartum hemorrhage, maternal and perinatal morbidity, low 5-minute Apgar score or admission to the neonatal care unit increases when the duration of second stage is longer than three hours for nulliparas and longer than two hours in multiparas.

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